

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Claims 1-21 (Previously cancelled).

--22. (Currently Amended) A reduced emissions work light, comprising:

- (a) a bulb comprising an elongated bulb tube;
- (b) an electromagnetic interference emissions containment housing located adjacent to said bulb;
- (c) an electronic ballast located within said emissions containment housing and operatively connected to said bulb; and
- (d) an electromagnetic interference emissions filter operatively connected to said electronic ballast, ~~whereby said emissions filter and emissions containment housing cooperate to reduce electromagnetic interference emissions generated by said work light;~~
- (e) a power supply cord adapted for being connected to a power source to supply electrical power to said work light, the power supply cord extending from a first end of the containment housing through the length of the containment housing to a second end of the containment housing; and
- (f) an emissions-insulating sheath positioned around the power supply cord to reduce electromagnetic emissions by the power supply cord when supplying electrical power to the work light, whereby the cumulative effect of the containment housing, electromagnetic emissions filter and power cord sheath results in a light meeting applicable military requirements for control of EMI emissions for lights having electronic ballasts.

23. (Previously added) A reduced emissions work light according to claim 22, and comprising a tubular, light-transmitting bulb shield surrounding said bulb tube to protect said bulb from damage.

24. (Previously added) A reduced emissions work light according to claim 23, and comprising a cylindrical shock-absorbing plug positioned within said bulb shield and engaging a free end of said bulb tube to further protect said bulb from damage.

25. (Previously added) A reduced emissions work light according to claim 24, wherein said plug includes an interior web for being gripped to remove said plug from said bulb shield.

26. (Previously added) A reduced emissions work light according to claim 23, and comprising a shock-absorbing end cap positioned over an end of said bulb shield.

27. (Previously added) A reduced emissions work light according to claim 22, and comprising a switch opening formed in said emissions containment housing to accommodate a ballast activation switch.

28. (Previously added) A reduced emissions work light according to claim 22, and comprising a removable color filter positioned over said bulb shield to filter light emitted by said bulb.

29. (Cancelled)

30. (Cancelled)

31. (Previously added) A reduced emissions work light according to claim 22, and comprising a light reflector located adjacent said bulb tube for enhancing illumination of said bulb.

32. (Previously added) A reduced emissions work light according to claim 22, and comprising an elongated pull strip releasably attached to said bulb for removing said bulb from said work light for replacement.

33. (Currently Amended) In combination with a mobile shelter system erected to create a covered interior, a portable reduced emissions work light adapted for illuminating the interior of said shelter system, said work light comprising:

- (a) a bulb comprising an elongated bulb tube;
- (b) an electromagnetic interference emissions containment housing located adjacent to said bulb;
- (c) an electronic ballast located within said emissions containment housing and operatively connected to said bulb; and
- (d) an electromagnetic interference emissions filter operatively connected to said electronic ballast, whereby said emissions filter and emissions containment housing cooperate to reduce electromagnetic interference emissions generated by said work light;
- (e) a power supply cord adapted for being connected to a power source to supply electrical power to said work light; and
- (f) an emissions-insulating sheath positioned around the power supply cord to

reduce electromagnetic emissions by the power supply cord when supplying electrical power to the work light, whereby the cumulative effect of the containment housing, electromagnetic emissions filter and power cord sheath results in a light meeting applicable military requirements for control of EMI emissions for lights having electronic ballasts.

34. (Previously added) A combination according to claim 33, and comprising a tubular, light-transmitting bulb shield surrounding said bulb tube to protect said bulb from damage.

35. (Previously added) A combination according to claim 34, and comprising a cylindrical shock-absorbing plug positioned within said bulb shield and engaging a free end of said bulb tube to further protect said bulb from damage.

36. (Previously added) A combination according to claim 35, wherein said plug includes an interior web for being gripped to remove said plug from said bulb shield.

37. (Previously added) A combination according to claim 34, and comprising a shock-absorbing end cap positioned over an end of said bulb shield.

38. (Previously added) A combination according to claim 33, and comprising a switch opening formed in said emissions containment housing to accommodate a ballast activation switch.

39. (Previously added) A combination according to claim 33, and comprising a removable color filter positioned over said bulb shield to filter light emitted by said bulb.

40. (Cancelled)

41. (Cancelled)

42. (Previously added) A combination according to claim 33, and comprising a light reflector located adjacent said bulb tube for enhancing illumination of said bulb.

43. (Previously added) A combination according to claim 33, and comprising an elongated pull strip releasably attached to said bulb for removing said bulb from said work light for replacement.

REMARKS

A Supplemental Information Disclosure Statement has been requested. Applicant has no further information and has been unable to locate additional information despite efforts to do so.

Claims 29, 30, 40 and 41 have been cancelled. Claims 23 and 33 have been amended to define over the cited art and to more distinctly define the invention in terms of its advantages over the prior art.

Claims 22, 23, 27, 29, 32-34, 40 and 43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruce Industries, Inc. reference in view of Auld, Jr. et al Publication No. US005449981A.

Claims 24-26 and 35-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruce Industries, Inc. reference in view of Auld, Jr. et al Publication No. US005449981A, further in view of Hesprich US005564821.

Claims 28 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruce Industries, Inc. reference in view of Auld, Jr. et al Publication No. US005449981A, further in view of Barnes US00223380.

Claims 30 and 41 and stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruce Industries, Inc. reference in view of Auld, Jr. et al Publication No. US005449981A, further in view of Davies US005043530.

Claims 31 and 42 and stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruce Industries, Inc. reference in view of Auld, Jr. et al Publication No. US005449981A, further in view of Crates US004945461.

Applicant respectfully traverses these rejections, subject to the amendments made above.

The new claims recite a reduced emissions work light including a bulb, an electromagnetic interference emissions containment housing located adjacent to the bulb, an electronic ballast located within the emissions containment housing and operatively connected to the bulb, and an electromagnetic interference emissions filter operatively connected to the electronic ballast. A power cord extends through the length of the light and is sheathed with an emission-reducing sheath. The emissions filter, emissions containment housing and sheathed power cord cooperate to reduce electromagnetic interference emissions generated by the work light to a point meeting military requirements for the control of EMI emissions, MIL-STD-461D, as stated and cited in the specification, as filed, at page 7, paragraph 56.

The prior art does not disclose, teach, or suggest a reduced emissions work light which incorporates an *electronic ballast* within an emissions containment housing. The prior art light utilizes a magnetic ballast which produces a relatively loud noise during use. Magnetic ballasts also generally require between 2-5 seconds of activation time, thus producing an annoying flicker prior to achieving full brightness. Furthermore, magnetic ballasts typically utilize a starter in conjunction with the ballast to induce a high voltage spike that will excite the gas inside the fluorescent bulb. Voltage variations and droppage will often cause the light to go out, thus requiring the starter and ballast to reactivate the fluorescent bulb. This can take anywhere from 2-8 seconds, causing a dangerous condition if there is only one light used for illumination.

The provision of a power cord extending through the length of the light is a highly desirable feature that permits a number of lights to be connected together in series, yet the cord itself emitted a significant amount of EMI. Surprisingly, it was learned that by using a braided power cord, the emissions from the power cord were reduced, but also the

emissions from other components were also reduced. This is a surprising result and provides the distinct advantage of reducing the amount of other shielding required, while still providing a light that can be easily connected together in series.

A Declaration of one of the inventors explaining the prior failed attempts to produce a work light as now claimed, the long-felt need for the claimed light, and commercial success of the light is attached for consideration by the Examiner. As set out in the attached Declaration, there has been a long-standing need for a work light which meets the military standards for durability and low emissions. The light as now claimed is the first such light to meet military specifications. As described in the Specification, particularly at paragraphs 56, 60, and Figures 2 and 3, the light has an electronic ballast 45. This feature is highly desirable for the reasons stated above. However, the drawback heretofore preventing the use of electronic ballast-type lights in many applications is the fact that an electronic ballast emits significantly more EMI radiation than conventional magnetic ballasts. As also noted in the attached Declaration, prior, unsuccessful efforts to solve the emission problem involved the expenditure of approximately \$500,000 by Bruce Industries, Inc., manufacturer of the prior art TM 10-5410-229 13&P light cited as prior art by the Examiner.

The light as claimed has been a commercial success. In an approximately 18 month period beginning January, 2002, seven thousand, one-hundred, thirty-nine (7,139) two-light sets having a sales value of \$2,893,743 have been sold--63% to the Defense Logistics Agency. The remaining 37% were sold to tent manufacturers or directly to military bases, including Ft. Campbell, Ft. Belvoir, Ft. Bragg, Ft. Hood, Ft. Detrick, Ft. Lewis, Ft. Benning, Ft. Carson, Ft. Polk, Ft. Stewart, Ft. Huachuca, Langley Air Force

Base, Brooks Air Force Base, Keesler Air Force Base, Camp LeJeune MCS and SBCCOM Natick.

Applicant submits that the Examiner has given insufficient attention to the requirement to make a prima facie case of obviousness by more than merely combining references. Applicant makes no claim that the elements of the invention, per se, are new. Applicant does contend that the prior art does not teach or suggest the claimed combination, and that the unobviousness of the claimed invention is demonstrated by the facts set out in the Declaration.

Relevant case law supports applicant's claim of unobviousness.

For example, in Ex parte Nesbit, the Board considered a case where the Examiner has correctly interpreted the teachings of the art, but had arrived at an incorrect conclusion regarding obviousness:

We next consider the rejection of claims 1 through 15 under 35 USC 103.

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As a consequence of our review, we agree with the examiner that the Porter Athletic Equipment reference discloses steel basketball rims used with glass backboards, that the patents to Newcomb and Pollock suggest illumination of targets for night or low light play, that the patents to Fox and Kutnyak disclose the conventionality of utilizing electric light sources in game devices to permit night or low light play, that the patents to Zapos and Best provide transparent portions on goal structures to provide protection for light sources mounted therein, and that the patent to Rydborn discloses the use of light detection means operable to override a switching means for an illumination means in response to ambient light levels.

However, we do not agree with the examiner that one having ordinary skill in the art would have found it obvious to have combined this mosaic of teachings in the manner proposed in the rejection of the claims on appeal. The initial burden of establishing a basis for denying patentability to a claimed invention rests upon the examiner. In re Piasecki, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984). In establishing a prima facie case of obviousness under 35 USC 103, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. Ex parte Clapp, 227 USPQ 972 (BPAI 1985). To this end, the requisite motivation must stem from some teaching, suggestion or

inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from appellants' disclosure. See, for example, Uniroyal Inc. v. Rudkin-Wiley Corp, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). As stated in W. L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), [t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

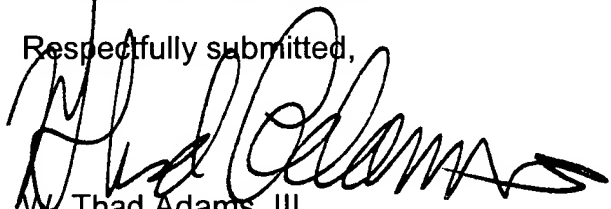
It is our conclusion that the only reason to combine the teachings of the applied references in the manner proposed by the examiner results from a review of appellants' disclosure and the application of impermissible hindsight. Thus, we cannot sustain the examiner's rejections of appealed claims 1 through 15 under 35 USC 103.

Ex Parte Nesbit, 25 U.S.P.Q. 2d 1817, 1818-1819 (1992).

As noted above, the Examiner must provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. The requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from appellants' disclosure. Applicant respectfully submits that when viewed in this manner, the claimed invention is patentably distinct from the cited art as combined, and the claims should be allowed.

For all of the reasons discussed above, Applicant submits that all of the claims in the case are now in condition for allowance. Such action is therefore requested at an early date. If the examiner believes that issues remain for discussion, he is invited to contact the undersigned at the telephone number or e-mail address listed below.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 10/16/2003.


Cecilia M. Sidebottom

10/16/2003
Date of Signature